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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/700,956

10/31/2003

William D. Holland

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03/21/2008

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INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

RODRIGUEZ, ARMANDO

ART UNIT

PAPER NUMBER

2828

NOTIFICATION DATE

DELIVERY MODE

03/21/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/700,956	Applicant(s) HOLLAND, WILLIAM D.	
	Examiner ARMANDO RODRIGUEZ	Art Unit 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-38 and 40-47 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 and 31-37 is/are allowed.
- 6) ☒ Claim(s) 9-12, 14, 15, 17-30, 38, 40-43, 45-47 is/are rejected.
- 7) ☒ Claim(s) 16 and 44 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In view of the Appeal Brief filed on December 10, 2007, PROSECUTION IS
HEREBY REOPENED. New grounds of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the
following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply
under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed
by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and
appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth
in 37 CFR 41.20 have been increased since they were previously paid, then appellant
must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by
signing below:

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public
use or on sale in this country, more than one year prior to the date of application for patent in the United
States.

Claims 9, 10, 12, 18, 19, 22-25, 29, 30, 40, 42, 43, 45, 47 are rejected under 35
U.S.C. 102(b) as being anticipated by Nakatsuka et al (US 2002/0024586).

Regarding claims 9, 18, 22.

Figures 1 illustrates a rotating scanning device (5), a light source (1), a
photoconductor (8), a photodetector (10), a control system (15) where the control
system receives an indication of the sampled light from the photodetector for

maintaining the light source at a constant drive level, as illustrated in the flow chart of figure 2 and described in paragraphs [0068]-[0072]. The flow chart clearly illustrates comparing the monitored light power with a predetermined value [applicant's constant] and generating a laser driving signal (S104).

Regarding claim 10.

As illustrated in figure 2 the light source (1) emits in a single direction.

Regarding claims 12, 24.

As illustrated in the flow chart of figure 2 the processing circuitry performs a comparison of the sampled light with a predetermined value.

Regarding claims 19, 38.

Paragraph [0066] discloses the light source (1) as a semiconductor laser.

Regarding claims 23, 45.

As illustrated in flow chart of figure 2 the laser driving signal generation performed based on the sampled light.

Regarding claim 25,

As illustrated in flow chart of figure 2 the output is maintained at a constant level.

Regarding claim 29.

Figures 1 illustrates a rotating scanning device (5), a light source (1), a photoconductor (8), a photodetector (10), a control system (15) where the control system receives an indication of the sampled light from the photodetector for maintaining the light source at a constant power level [applicant's intensity], as illustrated in the flow chart of figure 2 and described in paragraphs [0068]-[0072].

Paragraph [0064] discloses the use of toner particles to form images [applicant's image engine].

Regarding claim 30.

As illustrated in flow chart of figure 2 the laser driving signal generation performed based on the sampled light.

Regarding claim 40.

Paragraph [0066] discloses the light source (1) as a semiconductor laser and figure 1 illustrates control system (15) controlling the laser.

Regarding claims 42, 43, 45, 47.

As illustrated in flow chart of figure 2 the laser driving signal generation performed based on the sampled light. As illustrated in flow chart of figure 2 the output is maintained at a constant power level [applicant's intensity].

Claims 14, 15, 17, 18, 20, 21, 22, 27, 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hori (US 5,986,687).

Regarding claims 14, 18, 22, 27, 46.

Figure 2 illustrates a laser (LD), which generates a single beam, a scanning device (4), a photodiode (PD), a photodetector (9), a photoconductor (7), a control system (CPU), which receives the sampled light and maintains a constant drive level, as disclosed in column 4 lines 58-67. Column 5 lines 16-34 discloses the APC adjusting the laser power in accordance with a reference voltage [applicant's constant]. Figure 3 illustrates a timing chart, where the light is sampled once per line of information (draw area).

Regarding claim 15.

Figure 2 illustrates the light beam in a single direction.

Regarding claims 17, 20.

Column 5 lines 15-18 discloses the PD first detecting the light beam.

Regarding claims 21, 28.

Figure 2 illustrates the photodiode (PD) outside of the photoconductor.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakatsuka et al (US 2002/0024586) in view of Luque (US 6,198,497).

Nakatsuka et al discloses in paragraph [0066] discloses the light source (1) as a semiconductor laser.

Nakatsuka et al is silent as to the semiconductor laser being a vertical cavity surface emitting laser diode (VCSEL).

However, the use of VCSEL in laser scanning devices is notoriously well known in the art, as described by Luque in column 2 lines 33-50 and column 4 lines 14-30.

Allowable Subject Matter

Claims 1-8, 31-37 are allowed.

The following is an examiner's statement of reasons for allowance:

After careful review of applicant's arguments and conducting an updated search none of the cited prior arts alone or in combination discloses the claimed invention with the cited limitations of independent claims 1 and 31, to include among the limitations the start-of-scan detector.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Claims 16, 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ARMANDO RODRIGUEZ whose telephone number is 571-272-1952. The examiner can normally be reached on 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MINSUN HARVEY can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ARMANDO RODRIGUEZ/
Primary Examiner
Art Unit 2828

/Minsun Harvey/
Supervisory Patent Examiner, Art Unit 2828